

Abstract of PhD dissertation  
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# Measuring the Human Resources in Békés County

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## Scientific backgrounds and objectives

### Choice of subject

The examination of human resources descends from ancient times, however, its scientific study is almost some hundreds years old. In order to form army knowledge of the structure of the army, motivation and objective were needed. Nowadays, the research of this scientific area is necessary in a lot of fields of life as natural resources have been decreasing and the importance of human capital has been upgraded.

In my thesis I would like to introduce the effect of human resources on society, on its operation and on its processes. I chose Békés County as the basis of my research because of my previous research and my former publications. Békés County is one of those counties where the number of accumulated disadvantageous areas is relatively high, that is why revealing of these drawbacks and deeper examination of human resources are reasonable. It is well-known that the disadvantage of the county – so called Viharsarok – is descended from its history. It must be accepted but in the future we have to do our best disadvantages to disappear. The policy of regional balancing and the abolition of mental and economical ‘distance’ from highly developed counties could be important aims or if they are not possible decreasing of shortfall must be the target. One of the European Union’s aims is the regional balancing, and the EU spends 40 % of the budget on it. In order to use money efficiently objective and accurate researches are needed. It is gross public interest that idle human resource must not lie unutilized, and aging, segregation and the increase of migration ... etc. must be prevented with every possible methods. In order to reach it revealing the causes is essential. Békés County is a neighbouring county to Arad and Bihar counties, so it has got a natural attractiveness in labour-force, economy, consumer group and so on. Dynamic development has started, the frontier regions in Romania have been more developed in a lot of areas than the south Great Plain is. If the more developed western regions of Hungary intend to reach a higher quality of life from many points of view, further research is also necessary. The other reason why I chose Békés County is that I think it is not dispensable almost four hundred thousand people to be always underdeveloped. Everybody has the right to have high level of technical development, good transport, suitable infrastructural supply and medical system.

### Backgrounds of the research

Measuring human resource is not a novelty, the expression (Human Resource – HR) has been attached to economics since the beginning. Earlier its aim, mainly in the American and Western European scientific literature, was to assist in the selection of managers and in the evaluation of human features (BEAUMONT, P. B. 1991, 1992, BEER, M. 1984, BLYTON, P. 1985, 1992). The first documents evaluating human being as human capital were published in the post-fordist societies. In Hungary companies using this method comprehensively appeared in the 1990s (TRÓCSÁNYI A. 1999). The first scientific literature of economic approach was published at the end of the 1980s in Hungary (FARKAS F. – ELBERT, F. N. 1992, LÁSZLÓ GY. 1995). The first index which was to measure economic development was GDP. Because of the comparability of GDP a lot of countries can define their own development and their relationship to other countries. However, others claim that GDP is unsuitable to define economic

development, since it only demonstrates cash flow and it does not show what these sums of money were used for (STOCKHAMMER, E. – HOCHREITER, H. – OBERMAYR, B. – STEINER, K. 1997). From our point of view it is more important that it is not able to demonstrate the level of human resources and the tendency of development. GDP does not include social and human point of views (GÖRBE A. - NEMCSICSNÉ ZSÓKA Á. 2006). A new standpoint started to be accepted which claims that indexes being considered suitable for measuring economics are not able to reveal social demands. Scientists realized that improving new social indexes was necessary which could assist in the comparison of quality of life and developmental tendencies in each country and region (DALY, H. – COBB, J. 1989, FERRANS, C. E. 2006). Several scientists worked out indexes that included social standpoints nevertheless they still showed strong correlation with GDP, so they were not able to present real social processes (NORDHAUS, W. – TOBIN J. 1972, COBB, C. – HALSTEAD, T. – ROWE, J. 1995, 1997).

Quality of Life Index (QLI) was developed in 1985. It measures the satisfaction of the main areas of life and its importance.

Related to regional approaches of human resource many foreign authors explained the unique, typical problems of a company and state (COULOMBE, S. – TREMBLAY, J-F. 2001., ZHONGMING, W. – ZHI, Z. 2005), but only some of them tried to give global answers (RITZEN, J. M. M. 1978, TATA, R. – SCHULTZ, R. 1988, SHOKOOFEH, F. 2003, PRENDERGAST, R. 2004). Most Hungarian analysis aimed a regional level (TRÓCSÁNYI A. – WILHELM Z. 1996, TRÓCSÁNYI A. 1997), but others focused on the analysis of a region from different points of view, e.g. education, qualification and employment (TÓTH J. 1990, RAFFAY Z. 1994, TÓTH J. – TRÓCSÁNYI A. 1997, CSITE A. – NÉMETH N. 2007).

Referring to the development of infrastructure several presentations about Békés County have been born since 1950s, and some of them consist of research for the items of human resource. Demography, labour turnover and intellectuals make a separate, well-prepared area (DÖVÉNYI Z. 1974, ABONYINÉ PALOTÁS J. 1981, TÓTH J. 1982, LENGYEL I. – BAUKÓ M. 1986, BECSEI J. 1994), and urbanization is also in the focus of these excellent works (BECSEI J. 1975, 1985, BELUSZKY P. 1977, PERCZEL K. 1981). The research of the group of central Békés settlements was especially important and the detailed results are in a five-volumed book. This research dealt with all important factors of Békéscsaba, Békés, Gyula and their commuter belt; including the questions of human resource, labour force and urbanization (TÓTH J. 1981). The first comprehensive, national document on settlement level was published in 1999 (TRÓCSÁNYI A. 1999). Dr. Trócsányi examined the regional inequality of human resource on settlement level based HDI, which had been criticized.

HDI was developed by Mahbub ul Haq, a Pakistani economist. According to the English meaning, HDI (Human Development Index) is the index of human development. In 1961 Schulz stated that human factor was essential to the improvement, it was independent and not substitutable with other factors of production (SCHULZ, T. W. 1961). As we can see the notion of development can be defined differently. I accept the following definition: during the improvement human resource becomes more developed and more perfect and it reaches a higher standard. In 2001 Hungarian scientists worked out the regional type of HDI and every region of Hungary was classified into three groups (OBÁDOVICS Cs. – KLUCSÁR L. – MOKOS B. 2001). Unfortunately, HDI cannot be used on regional level as we do not have settlement sequential GDP data. In order to overcome this difficulty, serious researches started

with cluster-forming and factor-analysis whose purposes were to measure the economical condition (NEMES NAGY J. 1998, BUZÁS N. 2000), but their usage in human resource has been waiting for solution. The Hungarian adaptation of QLI is trail-blazing (MALCOLM S. 2000). QLI is different from HDI as the former one integrates the circumstantial and social sectors into the measurement of quality of life. Hungarian researchers has formed a unique quality of life index (ÉMI) based on Shooker's social, health, economical and circumstantial indicator. ÉMI is able to measure tendency-like changes (VÁMOS A. – FARKAS T. 2004). The first survey of human resource with regional indexes was made in 1998 but it could not be used on settlement level (OBÁDOVICS CS. – KULCSÁR L. – MOKOS B. 2001). Research of human resource on settlement level is not widespread. It can have two reasons. On the one hand, suitable indexes and data are missing. On the other hand, professionals of regional development do not find this kind of research as important as it is.

Quality and quantity analysis of human resource on company level go back far in past. Economic profitability has started a lot of research. However, on settlement level, either this area has not been allowed to be examined, or the local authority has not have the opportunity to do it because of the lack of material goods and professionals. Referring to this research it can be concluded that there are huge opportunities for professionals provided that demand and realization afford chance for them.

## Objectives of the research

The main purpose of this research is to examine and measure human resources in the settlements of Békés County so that the leaders of the settlements and the decision-making institutions can use the results in further development.

The following hypotheses have been elaborated as the aims of my research:

- By using national and international scientific literature, the most important indexes can be found that can help in the examination and measurement of human resource. If these indexes are available, they can be adapted to settlement level and a complex index can be formed whose parts mean the factors of human resource.
- By using this complex index in the settlements of Békés County its authenticity can be verified. According to my hypothesis, if I insert the statistical data into this index, I can get a rank of human resources of the settlements which can be extended by experiences and evaluated. So, its reality and validity can be established.
- By modification of the above mentioned index another index appears that becomes suitable for measuring human resource on settlement level, drawing up developmental possibilities and setting targets.
- Mayors and assistant secretaries in Békés County are able to judge the quality of human resource in their own settlement and find out the developmental opportunities. By asking them we can have a more complex and more accurate picture of the population's education, quality and condition in their own settlement. However, their point of view, experience and way of thinking are different they have considerable experience and they have been authorised to decision-making.

- The analysed index and the empirical data can reveal the current condition of the settlement and sketch the developmental possibilities in outline. My research can give a hand to professionals what direction the developmental sources would be advisable to aim in, provided that their purpose or sub-purpose is to maintain people's quality of life living in each region.
- The index and the empirical data together are suitable for revelation of human resources in Békés County, for drawing up strengths and weaknesses and for setting the objective. We can get a tool that extends the possibility of settlement developmental professionals.

I looked for the reply to the following questions in my thesis:

- What national and international indexes are to present human resource either as a whole or in part?
- What parts of these indexes can be adapted to settlement level?
- What method is suitable for establishing a complex index?
- What basic data are available on settlement level that can be suitable during the whole process?
- On what level of each factors are the settlements of Békés County and what differences can be found in the regions?
- What factors are considered to be important in connection with human resource by the leaders of the settlement and how important do they consider the previous factors?
- How do leaders evaluate their own settlement in this area, what tools do they use and what developmental facilities can they see?
- Are the results of the complex index supported by empirical data?

## Research methods

In my research I aspired for establishing a settlement-level index which is able and suitable for the revelation of quantitative and qualitative parameters of human resource. The current HDI used by UNDP is suitable for evaluation among countries. The regional-level changes of this index are not unified and accepted. Currently different indexes and statistical data are used to measure human resource on settlement-level, however, a claim has been raised for establishing a complex index. Basically, I had to ignore the usage of the concrete indexes of HDI in order to get a settlement-level index. One of its reasons is that many statistical data of settlements are not available, for example: life expectancy and GDP per person. Basically, the knowledge of writing and reading of adult population shows minimal difference among today's developed societies. The difference within a country or a county is even smaller because of the similar cultural and social processes.

## Quantitative methods

- The analysis of KSH data was used during quantitative evaluation. The survey was based on the results of the population census in 2001 and the micro-census in 2005 as more up-to-date data were not available on settlement-level. There was no opportunity to get more accurate information directly from the settlements because of financial and time limits. I used the following data of the population census in 2001: demography, employment and education.
- I collected supplementary data from the database of TeIR in 2007 and T-STAR in 2007 in order to evaluate certain factors of health, quality of life and culture. The database of TeIR was not reliable in case of the next indexes: number of water and gas supply and motor vehicle supply. That is why I took these data into consideration in the evaluation process but I did not do any modification because of preserving factuality.

The index groups mentioned above provide 70% of the final index. Those data which needed were made proportionate with the number of population after classification. Then I transformed these data to a ten-graded scale. After the transformation of several data I realized that quantitative raise of data was inversely proportional to the quality of human resource, for example: number of illiterates, number of old-aged people per 100 children, number of dependents ... etc. In these cases I used the inversed scale.

- On settlement-level I considered it very important to display the number of towns and their distance belonging to the commuter belt of a settlement in the index. The closeness of a city can provide cultural, health and educational functions to the settlement examined. According to practice, the more settlements make its institutions work in an administrative association, the coalition of forces has the greater importance. I used a special programme in order to examine transport availability. I got the necessary data referring to the fastest reach of the settlements. The rural, regional and county town accessibility of the settlements were given in minutes. The programme is not able to handle the quality of roads, so the longer period of time due to the bad condition of roads is not considered. The examination of transport availability takes maximum 30 % of the final complex index divided the accessibility of towns, regions and county towns proportionally in 10-10 %. Finally, I transformed these data into a ten-graded scale.

A settlement table was established based on the previous data that showed the condition of human resource of settlements after weighting. Weighting was based on the following table:



## Weighting of settlement HDI data extended by accessibility data

Factors	Weighting
<b>Demography</b>	
- natural increase and decrease	3%
- migratory difference	4%
- number of old-aged people per 100 children	6%
<b>Health</b>	
- number of people having free-health care service card	4%
- number of doctors	4%
<b>Quality of life</b>	
- number of households with water supply	1%
- number of households with gas supply	1%
- number of motor cars	3%
- number of households with cable TV	2%
<b>Employment, labour force</b>	
- proportion of employees	4%
- number of enemployed and inactive people	4%
- number of dependents	2%
<b>Economy</b>	
- sum of individual income tax base per person	5%
- number of entrepreneurship	6%
<b>Culture</b>	
- number of libraries	4%
- number of connections to the Internet in public educational intitutions	3%
<b>Education, qualification</b>	
- number of people who have not finished the first primary class	1%
- number of people who have finished eight classes	2%
- number of people having school-leaving exam	4%
- number of people having college or university degree	7%
<b>Accessibility</b>	
- average of accessability of the three closest towns	10%
- average of accessability of the three closest county towns or towns of county rank	10%
- average of accessability of the three closest regional centres	10%
Total:	100%

- I intended to compare the results of my research with the numerical evaluation of the leaders of the settlements. That is why I asked them to evaluate the factors of human resource as school marks. The objective of the survey was to reveal the similarities and differences between the leaders' opinion and my weighting. In the further part of the questionnaire I asked the leaders of the settlements to evaluate their own settlement based on the above mentioned factors. During the evaluation of the results I compared their opinion with my own results.



## Qualitative methods

During my research I used a questionnaire and the method of in-depth interview. I would have liked to know the leaders' opinion about two questions:

- What tendency can you see in connection with the quality of human resource in your settlement?
- What is done for the protection and improvement of the quality of human resources?

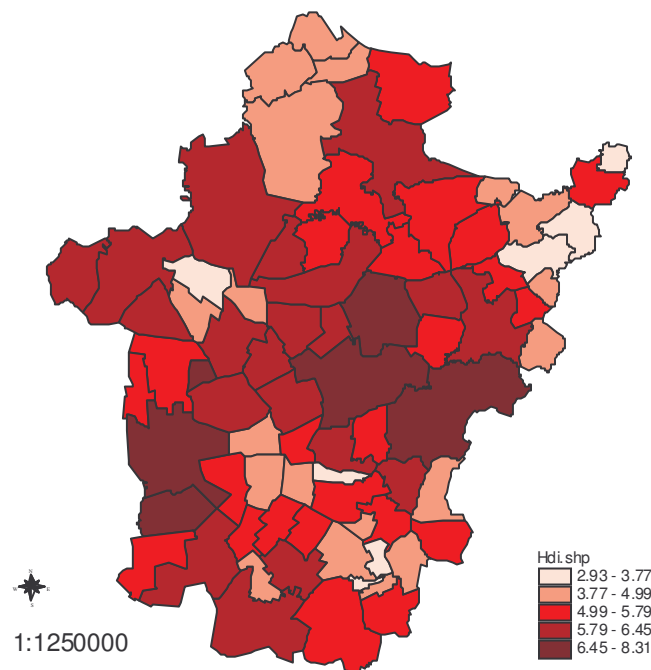
After analysis I realized that the data from Sarkad region were significantly worse than county data. Thus, I visited the leaders of this settlement and asked them to give their opinion about the current condition of human resource and its tendency. I interviewed mayors or assistant secretaries of eight settlements, and I summed up their opinions about their settlements. I classified my questions into the next topics: demography, education, qualification, employment, economy and culture.

## Summary of the results

In my thesis I let the condition of human resource in Békés County on settlement-level in on situation. The available data were not only used for the presentation of the current situation but by taking tendencies into consideration I tried to give advice and ideas that can help in the exploration of the possibilities hidden in humans. A lot of different indexes are widespread both in Hungarian and international scientific literature helping scientists in the examination of human resources. Some of these indexes are able to measure human resource, however, in order to get a complete, comprehensive analysis their simultaneous usage is necessary. In the examination of human resource on settlement-level – in the analysis of condition, in creating conceptions of settlement development, in writing applications – an absolute index is still used and its relationship to a bigger regional unit. In my research I looked for an index which is able to explore the relationship of the settlements taking human resource into account.

The modification to settlement-level of internationally accepted HDI (Human Development Index) was an opportunity that had to be ignored because of several reasons. First of all, some of its components were criticised seriously. These negative criticisms do not accept the validity of the index. On the other hand, at present we do not have settlement-level data to transform Human Development Index, thus I could not reach my aims this way. Based on scientific literature I found it essential to form a complete index including 23 indicators whose analysis could be used in the examination of human resource of the settlements. By the usage of this index (SHDI) I presented the development of settlements related to county and country data. The first twenty indexes show demography, health, quality of life, employment, economy, culture and education; the last three ones represent the three indexes of accessibility. I asked the mayors of Békés County to evaluate these indexes based on their importance. Based on the result of the representative survey, the importance of the above mentioned factors coincided with my former weighting.

## SHDI (Settlement Human Development Index) values of settlements in Békés County



Source: Szilárd Malatyinszki

In Békés County Békéscsaba reached 8.31 but Pusztatötöl got 2.93 from the maximum 10.00. The difference between them is almost triple. It is not a surprise that the three cities of central-Békés centre, Békéscsaba, Gyula and Békés, are in the first five places on the human resource development list. These cities have been considered to be a tractive force. Nowadays Békéscsaba has been losing its priority while Gyula has had better conditions because of the more efficient usage of sources. The other outstanding area in the county is Orosháza and its region. We can find settlements with quite low indexes in both regions. It is interesting that there are some college faculties in Szarvas, however, this town is on the 14<sup>th</sup> place according to my human resource survey. On regional level Sarkad, Szeghalom and Mezőkovácsháza and their settlements have the weakest results. There is strong correlation between accessibility and human resource development. According to the picture above, the centre and the settlements close to it are more developed but settlements further from the regional centre or from bigger settlements are less improved. The later ones are unable to maintain and preserve the human resource potential from their own resources. Typically, almost all settlements of the north-east Sarkad region, northern Szeghalom region and Mezőkovácsháza region have low human capital level.

Towns and villages had almost the same chance, since the first ten settlements have three villages and the first twenty settlements have nine villages. In the order of rank, economically improved settlements lost their front rank position (e.g.: Gyomaendrőd, Körösladány) and relatively underdeveloped settlements came to the front rank (e.g.: Kardoskút, Kétsoprony, Kamut). The results of qualitative questions asked from mayors show that settlements have weaker indexes in those areas that are the most important.

Thus, leaders can understand the weighting of the problems but they feel that their own power is not enough to solve the problems.

After drawing the settlement-level human resource map I intended to feedback empirically with interviews and questionnaires. Their purpose was to support or disprove the results of my survey.

During my research I managed to make interviews with leaders in the most developed region in eight out of eleven settlements. According to the leaders' opinion in Sarkad region the development of human capital cannot be solved because of several difficulties by their own resources. In this region decrease of population can be seen – except of some settlements with Roma population – consequently young, educated and mobile people leave their place of birth. The population stayed here belongs to the old and the poor, or people who have such professions that are not needed. So, they are not able to cope with the labour market on their own. While they are looking for help of the local authority or the state certain elements of the social system are being imposed cost. The local economy is unable to employ the labour force since their services and the local demand for the products are very small. Local entrepreneurs can employ new workers and retain the current ones only in supported ways. It happens fairly frequently in summer holiday employees' employment is terminated by mutual agreement – they can get job-hunting provision – and in autumn they become employed again. Centralization can be seen in public education and public health because of the change of support system. Less liquid authorities can maintain their institutions in association; so their inhabitants have to travel to use certain services, that increases the cost again. Among others this is also the cause of fast migration.

In the whole area of the region farmers are individual entrepreneurs and agricultural producers with weak financial standing and low prosperity. The local tax revenue of the authorities is very little, it is usually enough to compensate the damages caused by bogus self-employments. We cannot find employers employing more than 10 workers besides local authorities and one or two agricultural entrepreneurs. According to the mayors and assistant secretaries it has got two causes. First, transport accessibility is not attractive for entrepreneurs who would like to become inhabited. Second, the local population has low financial standings and weak spirit of entrepreneurs. Agricultural production is not typical with one or two exceptions (Méhkerék) because of the non-profitable and poor quality ground.

The economical and infrastructural underdevelopment, the defective function of social systems and the lack of social cohesion motivate people to migrate. The leaders agreed with the results of my survey and they said that the value of human resource development represented the proportion among settlements properly. Mayors' and assistant secretaries' suggestions for solution were more modest than the exploration of problems. Some settlements have taken the advantages of applications with 5-10 % own resources, so social buildings, old people's homes and sports halls have been built. Unfortunately, their maintenance is not easy. Others have established processing plants, however, they are not able to compete with multi-national companies. Many leaders missed the coalition of forces either within the settlement in civil co-operations and in entrepreneurial sector or in applications and in maintenance of institutions. Leaders of the settlement (would) have the greatest effect on creating community and on coalition of forces.

On county level, the lack of infrastructure is emphasised besides economical underdevelopment. In order to improve human resource newly-graduated people are

employed. Leaders try to support getting a flat and settling down as they can. Some towns (Szarvas, Gyula) focus on the improvement of tourism, that increases the rate of employment. The current weak development is the cause of migration that indicates economical and social tension. Confusion and lack of motivation can be found in mayors' and assistant secretaries' replies.

Unfortunately, I have to join György Kőszegfalvi's thoughts: 'intellectual infrastructure has not had the straightforward role in site development that is set up by economical and social quick change and renewal' (KŐSZEGFALVI GY. 1990). The development of intellectual-cultural life is needed in the areas where economy is relatively underdeveloped and termination of unfavourable situation is essential. It is quite informative that Békés County is not among the regional centres of intellectual life. Szeged, Debrecen, Arad or Kolozsvár as regional centres can provide appropriate example for us (Kozma T. 1983, Tóth J. 1990). Utilization of connecting possibilities with the historical Hungary could help Békés County to overcome the difficulties (TÓTH J. 1996). The European Union supports similar initiations by outstanding resources.

By taking dynamic analysis into consideration we can state that decrease of population in Békés County settlements has been more and more intensive, the population stayed here has been getting older and the degree of migration has been increasing. In many cases the accessibility of primary and secondary schools is not suitable for everybody to have equal chance to get any level of education. Accessibility to libraries and the Internet is limited so people living in a settlement with a small population are especially in disadvantageous situation. Besides transport accessibility there is no relevant difference in other infrastructural state of supply. As services are unavailable the purpose of the population is to extend their opportunities by getting vehicles. Permanent travelling is cost- and time-consuming which uses up resources in those areas where there are existential difficulties even without it. Employment in Békés County is quite low nationally, especially in Sarkad and Mezőkovácsháza regions. The rate of secular unemployed people was increasing significantly between 2001-2006. In the long run these people will not have the chance to enter the labour market again. In a lot of areas multi-generation unemployment can be seen. The number of entrepreneurs is very little, increase in this area is minimal. Mainly, the number of individual entrepreneurs raises but unfortunately most of them are bogus self-employments.

## Utilisation possibilities of the results

The new index provides possibilities to introduce and examine the differences of human resource among settlements. Based on settlement-level differences we can define the level of poorness which is very important in applications. Settlement-level index can provide accurate and objective information for politics aiming site balancing.

Parts of human resource that have been unavailable can become utilizable. The level and place of shortfall become visible for the leaders of less-favoured regions.

This index can be a useful tool on local, regional and national level for professionals of site development in strategies, plans and activity programmes.

## Suggestion for human resource- and site development

In settlements where human resource concentration is high (Békéscsaba, Gyula, Orosháza, Szarvas) the co-operation of inner network of institutions must be

strengthened. In other areas establishing new networks is necessary to decrease regional inequality; it is especially suggested in education, social provision and culture. The inhabitants from accumulatedly underprivileged regions (Sarkad, Szeghalom, Mezőkovácsháza) must be activated and involved into programmes. The purpose must be to renew living conditions and establish suitable circumstances. It is provided by programmes for people living on usual social benefit; and significant sources are available. It should be important to use these sources professionally in order to establish a dynamic community in the long run. We have to create a recipient, innovative environment where people can co-operate with each other and support each other. We do not need such improvements that work only for an elective period but that can work in the long run and establish tendency.

Own entrepreneurs operated by the settlement, based on traditions and regional features may be operated which employ people living on usual social benefit. Hand in hand with other settlements everybody could add their own actuality to the activity. By transportation of employees those activated areas might be put in the focus, even in non-profitably, that can decrease the social expense of the authorities.

The maintenance of authority system is quite expensive in all settlements. Decrease of the number of officers working for local authorities would liberate a significant sum of money that could be used for activating underprivileged areas.

The opportunities in local environment, society and economy should be explored and used for communities. If the community does not have any kindling, people should not steal but the authority should organize woodcutting for the old and the underprivileged cheaply by public workers. So, people who would steal wood could get the money. In the summer, growing and picking up certain herbals could be organized in the same way, 8-10 local authorities could establish a collection centre, so people living on non-working would be employed. This way, good example would be provided for the young that unemployment is not the objective of life and it could be avoided as a multi-generation problem.

We should exploit the closeness of borders and the dynamic development in Arad and Nagyvárad. It is advisable to establish considerable co-operation with industrial parks over the frontier. The mayors of the region should be introduced what is happening 70-80 km further in order to be able to share their experience and perhaps to establish serious economical connection.

The underprivileged condition of Békés County is quite sad, but we are not allowed to evaluate the situation as we are unable to change it. The thesis introduced the condition and dynamic of human resource in the settlements of Békés County. I managed to establish a human resource index on settlement level that is able to measure human capital and compare the settlements from its point of view. After reading the analysis it is obvious what tendency could be expected if we do not do anything and if there is no coalition and complex thinking. Separately each settlement is weak from economical point of view and their lobbyist power is on low level. If the leaders can name the suitable, common purposes and they do their best to reach them, they will be capable to attract capital and attention to the region. So, people living here could become calm and proud European citizens.

## Further perspectives of the research

The establishment of human resource index on settlement-level was based on former research and analysis of scientific literature. This research can be suggested as the basis of a further survey of this region. First, international professionals decide the indexes and their weighting that can assist in the exploration of human resource on settlement-level. Then, data-respondents must have the possibility to give these settlement-level data to scientists. This research could be extended on national or wider level with the help of these tools.

The local and regional decision-makers have to know the results of this research in order to be able to decide properly and utilize them in developmental plans.



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